Country Presentation
(Bangladesh)

M. Khalaquzzaman, PhD
Bangladesh Atomic Energy Commission
Outline

- Country Overview
- National Electricity Demand and Projections
- Current Status of Nuclear Power Program
Country Overview

- Area: 147,570 sq. km.
- Population: 159 Million (appx.)
- GDP Growth: 6.1%
- Electricity demand growth: 7% (appx.)

Commercial Energy Resources:

Natural Gas: 20 TCF
Coal: 884 MM Tones
Hydro: 800 GWh
Generation Capacity by Fuel

Total 9821MW (Yr. 2014)

- Gas: 61.26%
- Furnace Oil: 20.87%
- Diesel: 8.40%
- Coal: 2.04%
- Hydro: 2.34%
- Import power: 5.09%

Total 42195 GWh (Yr. 2014)

- Gas: 72.42%
- Furnace Oil: 15.44%
- Diesel: 2.91%
- Coal: 2.46%
- Hydro: 1.39%
- Imported Power: 5.37%
Electricity Demand Forecast

Source: Power System Master Plan 2010
Power Generation-mix

Considering the fuel diversification issue, the Power System Master Plan-2010 aims to acquire the fuel mix as follows:

• Coal 50% (30% domestic coal and 20% imported coal),
• Natural gas 25% (including LNG),
• Liquid fuel 5% and
• Nuclear 20% (including renewable and cross-border trade)
Proposed Power Generation-mix (contd.)

Current Installed capacity: 11,877 (as of October 2015)
Peak Load : 8000 MW

<table>
<thead>
<tr>
<th>Energy</th>
<th>Target</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current (%)</td>
<td>2021 (%)</td>
<td>2030 (%)</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>72%</td>
<td>30</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Coal</td>
<td>2.46%</td>
<td>53</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td>18.35%</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Hydro</td>
<td>1.39%</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>0</td>
<td>10</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Renewable</td>
<td>-</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
LOCATION OF THE RNPP SITE

AREA

Project Site Area: 105 Hectare
Residential Area: 13 Hectare
National Energy Policy, 1996: Nuclear energy was considered as a energy supply source of generation-mix approved by the Govt.

Bangladesh Nuclear Power Action Plan (BANPAP) was approved by the Govt. in 2000

Nuclear power has been included in the Power System Master Plan (PSMP)-2010
A decision for implementation of the Rooppur NPP was approved by the parliament in 2010;
Nuclear Energy System Collaboration Strategy

Inter-governmental Agreement (IGA) between Russia and Bangladesh in 2011 for installation of 2x1000 MWe VVER

Co-operation in the following areas:

- Designing
- Construction
- Operation
- Spent Fuel Management
Fuel Cycle

- No activities associated with nuclear fuel cycle that are not under the IAEA safeguards
- Nuclear fuel in the form of ready fuel assemblies
- Front-end fuel cycle
- Returning the nuclear spent fuel to the supplier
Implementation of NPP Project

• The “Bangladesh Atomic Energy Regulatory Act-2012” passed by the government;
• An independent nuclear regulatory authority was established
• An bilateral Agreement on cooperation in nuclear and radiation safety was signed in February 2012 between the Nuclear Regulatory Authority, Russian Federation and the MOST, Bangladesh;
• Nuclear Power Plant Act 2015 was passed by government and NPP operating organization is established

Nuclear Power Plant Company Bangladesh Limited (NPCBL) was established
The preparatory phase of construction activities of the first NPP, “Rooppur NPP” has already been started;

Development of the second NPP project at the Southern Part of the country is in active consideration of the government.

Contract 1: Feasibility Evaluation and EIA

Contract 2: First priority working documentation and engineering survey for the design stage of Rooppur NPP

Contract 3: Performance of first priority Works for the Preparatory stage of Rooppur NPP construction.
Thank You!